



SMITHSONIAN INSTITUTION
U. S. NATIONAL MUSEUM

Vol. 88

Washington: 1940

No. 3083

NEW GENERA AND SPECIES OF ICHNEUMON-FLIES,
WITH TAXONOMIC NOTES

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THIS paper consists of the description of two new genera and nine new species of ichneumon-flies, together with some notes on synonymy, generic transfers, and the renaming of a genus the old name of which is preoccupied. Also included is a key to the species of the genus *Cryptohelcostizus* Cushman. The figures are from drawings by Mrs. Mary Foley Benson.

Genus POLYCYRTUS Spinola

POLYCYRTUS BICOSTATUS, new species

In my general key to the species of *Polycyrtus*¹ this species will run best to *erythrosterneus* Cameron, but it has the propodeum of entirely different form and differs by many other details of structure and color. In my key to species examined (p. 2) it runs to the second alternate of couplet 7 but differs from all the species falling in that category in the form of the apical carina, which is broadly transverse, instead of angulate, medially.

Female.—Length 11 mm., antenna 9 mm., ovipositor sheath 3.5 mm.

Vertex in front view flat and at the same level as upper eye margins; frons polished, scrobes moderately deep, horn very short conical, without basal pits or tubercle; eyes parallel within, comprising nearly two-thirds total width of head; inner orbits very finely shagreened

¹Proc. U. S. Nat. Mus., vol. 78, art. 14, p. 53, 1931.

and subopaque; face sparsely, weakly punctate, slightly elevated medially; clypeus moderately convex; malar space shagreened, nearly as long as basal width of mandible; cheeks in front view nearly straight; mouth as broad as face; occipital carina convergent above with posterior margin of eye, complete to hypostomal carina, not elevated below; temples in dorsal view weakly convex, hardly a third as long as short diameter of eye. Pronotum polished, posterior groove weakly foveolate, epomia distinct only in middle, anterior lateral carina weak; humeral margin only slightly tumid; mesoscutum polished, with scattered punctures anteriorly, prescutum low and broad; scutellum rather broad and weakly convex, polished; mesopleuron sparsely punctate, prepectal carina complete, the groove foveolate, subalar tubercle rather low; lower division of metapleuron very sparsely punctate, upper division more densely so; propodeum with both transverse carinae complete and strong and with a well-defined basal area and a large obsoletely defined hexagonal areola, both transverse carinae arched forward and transverse medially, apical carina prominent at angles, petiolar area with radiating rugae; pleural carina distinct, with foveolate grooves above and below. Hind femur rather slender, inner calcarium nearly half as long as basitarsus. Areolet small, the lumen hardly as broad as the surrounding veins, recurrent at middle; nervulus antefurcal, postnervulus broken slightly below middle, nervellus broken at lower third. Abdomen polished, first segment rather strongly decurved, second tergite less than three times as long as broad at base, distinctly shorter than first; sheath as long as hind tibia.

Head black, face medially and clypeus reddish; anterior orbits throughout, a spot on malar space, top of clypeus, labrum, and mandibles whitish; palpi stramineous; antenna black with an incomplete annulus occupying flagellar joints 5-14 white; thorax anteriorly and dorsally black, posteriorly and ventrally ferruginous, the black embracing the pronotum, mesoscutum, postscutellum medially, and upper angle of mesopleuron; humeral margins of pronotum, scutellum except apex, subalar tubercle, and tegulae whitish; legs ferruginous, with all tibiae and tarsi and front trochanter yellowish; hind femur largely and trochanter dorsally black to piceous, the femur more reddish below and basally; wings hyaline, venation blackish; abdomen black with petiole and narrow margins of tergites ferruginous, venter yellow.

Type locality.—Chancha Mayo, Peru.

Type.—U.S.N.M. No. 5349.

One specimen taken in September 1928 by G. N. Wolcott.

Genus **HOPLOCRYPTUS** Thomson**HOPLOCRYPTUS BITUMINOSUS** (Cushman), new combination

Cryptoides bituminosus CUSHMAN, Proc. U. S. Nat. Mus., vol. 60, art. 4, p. 6, 1924.

Since its publication this species has been received several times in small numbers, reared from *Pyracusta nubilalis* (Hübner) at Belmont, Mass., and New Haven, Conn.; from *P. penitalis* (Grote) at Bono, Ohio; from *P. ainsheli* Heinrich at Yerk, Ind., and Bono, Ohio; and from *Diatraea* at Grand Isle, La. Other localities, without rearing data, are Nantucket, Mass., Englewood, N. J., and Baton Rouge, La.

Among these specimens are several examples of the undescribed male. This sex differs from the female in the usual secondary sexual characters of smaller size, more slender form, especially of the abdomen, and more slender, longer, and apically tapering antennae. The head is a little broader behind the eyes and the wings a little less deeply infumate.

Genus **CRYPTOHELCOSTIZUS** Cushman

The receipt of specimens of two undescribed species brings to four the number of North American species referable to this genus. They may be distinguished by the following key:

1. Areolet large, first intercubitus more than half as long as second recurrent; wings deeply infumate----- dichrous Viereck
Arolet small, first intercubitus not or barely half as long as recurrent; wings hyaline or dilutely infumate----- 2
2. Legs in female and hind tibia in male largely black; postscutellum black; wings in female dilutely infumate---- chrysothridis, new species
Legs in both sexes, except coxae and trochanters, red; postscutellum white; wings hyaline----- 3
3. First abdominal segment entirely red; posterior orbital mark very narrow and not contiguous with eye; scutellum and coxae immaculate black and propodeum usually so; tegula white only at base----- alamedensis (Ashmead)
First abdominal segment black with apex red; posterior orbital mark very broad and contiguous with eye; scutellum, propodeum, and coxae conspicuously white-marked; tegula entirely white----- ornatus, new species

CRYPTOHELCOSTIZUS ALAMEDENSIS (Ashmead)

Cryptus alamedensis ASHMEAD, Proc. U. S. Nat. Mus., vol. 12, p. 409, 1890.

Cryptohelcostizus rufigaster CUSHMAN, Proc. U. S. Nat. Mus., vol. 55, p. 534, 1919.

Cryptohelcostizus alamedensis (Ashmead) CUSHMAN, Proc. U. S. Nat. Mus., vol. 60, art. 21, p. 7, 1922. Synonymy of *rufigaster* with *alamedensis*.

Additional reared specimens, all from larvae of Buprestidae, confirm the host record published with the description of *rufigaster* and

cast doubt on the record of Ashmead "from an unknown lepidopterous host." Also all specimens of the two new species described below were reared from buprestids.

The following specimens have been received since the publication of *rufigaster*: 2 females and 2 males reared from *Chrysobothris mali* Horn at Stanford University (May 15, 1922), Los Gatos (May 23, 1918), and Simla Station (June 28, 1922), Calif., under Hopkins U. S. Nos. 16065 a 3, 15913 B 1, and 16634 a, respectively; one female "from flathead borer on *Malus* sp.," Chico, Calif., February 15, 1912, J. R. Horton; and one female, Corvallis, Oreg., April.

CRYPTOHELCASTIZUS DICHROUS Viereck

Cryptohelcastizus dichrous VIERECK, Psyche, vol. 28, p. 73. 1921.

Distinct from all the other species in the deeply infumate wings and large areolet. Viereck failed to note the red hind femora in the male.

Before me are females from Manumuskin, N. J., April 29 and October 21, 1901, and Virginia Beach, Va., October 18, 1922 (Jones-Walker-Brannon); and males from Texas (Belfrage) and Conover, N. C., October 8, 1919 (J. E. Eckert), the last compared by me with the allotype.

CRYPTOHELCASTIZUS CHRYSOBOTHRIDIS, new species

Structurally very like *alamedensis* Ashmead, but so distinct in color, especially of the legs, as to appear specifically distinct.

Female.—Length 12 mm., antenna 9 mm., ovipositor sheath 4 mm. Black, with abdomen, except petiole, ferruginous, and with the following whitish markings: Narrow lines in frontal and posterior orbits (the latter not contiguous with eye) and rarely a triangular mark on cheek, narrow transverse streak on clypeus, incomplete annulus on flagellar joints 8 and 9, and rarely the humeral margin of pronotum and a small spot on base of tegula; flexor surface of front tibia reddish; hind femur basally more or less pale or reddish above; joints 3 and 4 of hind tarsus reddish; wings distinctly, though not deeply, infumate.

Male.—With all white markings of female, except antennal annulus, and also with facial orbits, spot on base of each mandible, and joints 3 and 4 of hind and middle tarsi white; front and middle legs beyond trochanters and the hind femur largely or entirely ferruginous.

Host.—*Chrysobothris* sp. on apple.

Type locality.—Stillwater, Okla.

Type.—U.S.N.M. No. 53492.

Ten females and five males, all reared by Myron Maxwell, March 16–April 8, 1936.

CRYPTOHELICOSTIZUS ORNATUS, new species

This species also is very closely related to *alamedensis*, but may be distinguished from that and from both the other species by its highly ornamented head and thorax. In the following description only those characters are given by which it differs from *alamedensis*.

Female.—Length 11 mm., antenna 7.5 mm., ovipositor sheath 3 mm.

Face mostly polished and sparsely punctate, combined length of face and clypeus fully as long as width of face (distinctly shorter in *alamedensis*); interfoveal line hardly longer than foveo-ocular line (much longer in *alamedensis*); temples convex; ocellocular line much shorter than postocellar line and a little longer than diameter of an ocellus (in *alamedensis* the postocellar and ocellocular lines are nearly equal and nearly twice as long as the diameter of an ocellus); apical joint of antenna tapering slightly (cylindrical in *alamedensis*); first tergite a little more slender than in *alamedensis*, with spiracles slightly beyond middle; spiracles of second tergite at middle (distinctly before middle in *alamedensis*); sheath of ovipositor much less than half as long as body.

White markings of head and thorax much larger than in *alamedensis*; orbital ring very broad and only narrowly interrupted on vertex and malar space, contiguous with eye posteriorly and broadening below to embrace nearly entire width of cheek; antennal annulus on flagellar joints 7-9; collar and both upper and lower margins of pronotum broadly white, as are also the subalar tubercle, tegulae, apex of scutellum, postscutellum, two large lateral spots and a small median spot at apex of propodeum, upper surfaces of all coxae largely, and basal joints of front and middle trochanters except dorsally (coxae and basal trochanteral joints otherwise black); first tergite black, with apex broadly ferruginous and with the extreme apex medially yellow.

Host.—*Chrysobothris deserta* Horn in desert holly.

Type locality.—Death Valley, Calif.

Type.—U.S.N.M. No. 53493.

One specimen reared February 23, 1939, by M. F. Gilman.

APOTEMNUS, new genus

The proper position for this unusual genus, whether in the Phygadeuonini or in the Hemitelini, is very doubtful. In none of the keys to the Phygadeuonini will it run to any genus that evenly remotely resembles it in general form. Because of its slender antennae, hairy face, and distinct notaulices it runs best to *Panargyrops* Foerster, but beyond these characters and its bidenticulate clypeus it has little in common with that genus. In the keys of Foerster and Ashmead to the Hemitelini it runs directly to *Isadelphus* Foerster,

with which it agrees in many features of the head, thorax, and appendages. From both these genera it differs remarkably in the abruptly truncate propodeum and the stout, *Pimpla*-like abdomen with very short first segment and transversely impressed tergites 1-4.

Female.—Head transverse; temples narrow, ocelli small; eyes divergent below; malar space long; face and clypeus with dense, short, silvery hair; clypeus weakly separated, minutely bidenticulate; mandible evenly bidentate; antenna slender, basal three joints of flagellum very long.

Thorax stout; epomia distinct; notaulices rather deep anteriorly, obsolescent on disk; sternaules deep anteriorly, obsolescent in posterior third; scutellum convex, immargined; metapleuron flat; propodeum broadly truncate, the apical carina thick, prominent laterally, costulae and basal portions of median carinae obsolete, all other carinae absent, spiracles very small, circular; legs moderately stout, hind femur tapering from basal fourth to apex; stigma narrow, with radius somewhat beyond middle; areolet pentagonal, second intercubitus largely bullated; nervulus postfurcal; second discoidal cell with apical angle acute; postnervulus broken far below middle; nervellus broken far below middle and strongly inclivous.

Abdomen stout; first tergite nearly as broad as long, the sides widely divergent to spiracles, thence more gradually divergent, a shallow subapical transverse impression, petiole broadly flattened, tergite in profile nearly rectangular above, dorsal carinae strong to summit of elevation, spiracles a little behind middle; other tergites strongly transverse, apices tumid; tergites 2-4 with broad transverse impressions, those of 2 and 3 with a small low tubercle at each end; ovipositor slender, compressed, narrowly subsagittate at apex, sheath much shorter than abdomen.

Genotype.—*Apotemnus truncatus*, new species.

APOTEMNUS TRUNCATUS, new species

FIGURE 15

Female.—Length 8 mm., antenna 6 mm., ovipositor sheath 2 mm.

Head polished; face and clypeus very finely and densely punctate and mat; face more than twice as broad as long; temple convexly, sharply sloping; malar space as long as basal width of mandible; antenna 24-jointed, basal two joints of flagellum equal and each about six times as long as thick, all other joints at least a little longer than thick.

Thorax polished, with short, fine, appressed pubescence, humeral portion of pronotum, mesoscutum along margins and on middle of disk, scutellum, lower portion of mesopleuron, mesosternum, and

metapleuron minutely punctate; propodeum basad of carina polished, laterally minutely punctate; apical truncature weakly, transversely rugulose, shining.

Abdomen shining, weakly and minutely alutaceous, with fine sparse punctation; ovipositor sheath hardly as long as first two tergites.



FIGURE 15.—*Apotemnus truncatus*, new genus and species.

Head black; scape reddish in front; mandibles white basally; palpi pale; thorax ferruginous, with black sutures; pronotum and prepectus largely, discal spot on mesoscutum with branches along notaulices and middle of prescutum, an irregular longitudinal spot on middle of mesopleuron, and the propodeum black, the last with a faint, transverse, reddish streak before carina; wings hyaline, stigma and costa stramineous, veins black, tegulae and humeral angles of pronotum white; legs ferruginous, front and middle coxae and trochanters and extensor surfaces of tibiae stramineous; abdomen piceous, darker at bases of tergites and more reddish at apices and

laterally, with tergites very narrowly whitish apically; venter pale, with sternites blackish.

Type locality.—Corvallis, Oreg.

Holotype.—U.S.N.M. No. 53494.

One specimen taken July 13, 1935, by George R. Ferguson.

Genus ITOPLECTIS Foerster

ITOPLECTIS ATROCOXALIS (Cresson)

- Pimpla atrocoxalis* CRESSON, Trans. Amer. Ent. Soc., vol. 3, p. 146, 1870.
Pimpla oralis THOMSON, Opuscula entomologica, fasc. 8, p. 748, 1877.—SCHMIEDEKNECHT, Zool. Jahrb., vol. 3, p. 494, 1888; Ill. Wochenschr. Ent., vol. 2, p. 510, 1897; Opuscula ichneumonologica, fasc. 14, p. 1073, 1906.—GEHES, Deutsche Ent. Zeitschr., 1908, p. 467.—SCHMIEDEKNECHT, Zeitschr. Angew. Ent., vol. 1, p. 414, 1914.—HEINRICH, Deutsche Ent. Zeitschr., 1928, p. 87.—CONSTANTINEAU, Ann. Soc. Univ. Jassy, vol. 15, p. 231, 1928 (1929).—SCHMIEDEKNECHT, Opuscula ichneumonologica, suppl.-band, fasc. 19, p. 96, 1934. New synonymy.
Pimpla (Itoplectis) oralis THOMSON, Opuscula entomologica, fasc. 13, p. 1409, 1889.—HENSCH, Konowia, vol. 8, p. 127, 1929.
Pimpla maculator var. *oralis* (Thomson) HAUPT, Mitt. Ent. Ges. Halle, 1913, Nos. 5-6, p. 55.
Itoplectis oralis (Thomson) MORLEY, A revision of the Ichneumonidae based on the collection in the British Museum (Natural History), pt. 3, p. 78, 1914.—SEYRIG, Eos, vol. 3, p. 217, 1917.
Itoplectis pudibundae ROMAN (not Ratzeburg), Arkiv för Zool., vol. 9, p. 25, 1914.—HELLÉN, Acta Soc. Fauna et Flora Fennica, 1915, p. 39.—SEYRIG, Ann. Soc. Ent. France, vol. 101, p. 116, 1932.
Itoplectis atrocoxalis (Cresson) CUSHMAN, Proc. U. S. Nat. Mus., vol. 58, p. 341, 1920.
Pimpla pudibundae HABERMEHL (not Ratzeburg), Konowia, vol. 9, p. 112, 1930.

The acquisition of more material from both North America and Europe convinces me that *atrocoxalis* and *oralis* are identical.

Perusal of the original description of *Pimpla pudibundae* Ratzeburg would seem to indicate that Roman was wrong in synonymizing *oralis* with that species, for *pudibundae* is described as having the ovipositor as long as the abdomen and the hind coxae red-brown. Also Ratzeburg states that he reared his species as a gregarious external parasite, never from the pupa. This is an impossible habit for an *Itoplectis* but is exactly the habit of *Iseropus* and of a few species of *Epiurus*. From the fact that the face of the male of *pudibundae* is not yellow I suspect that it is an *Epiurus*.

Genus CALLIEPHIALTES Ashmead

CALLIEPHIALTES FERRUGINEUS, new species

In my recently published key to the Neotropical species of *Calliephialtes*² this species runs to *minutus* (Brullé). From that species

² Rev. Ent., vol. 9, pp. 96-97, 1938.

it is immediately distinguishable by its red head and red, not yellowish, scutellum and abdomen.

Female.—Length 8 mm., antenna 6 mm., ovipositor sheath 8 mm.

Head and thorax polished, unsculptured, and glabrous, except that the face is sparsely and the propodeum very sparsely hairy and the clypeus bears several long hairs; temple strongly convex but not reaching outside tangent of eye; eyes slightly convergent below and shallowly emarginate opposite antennae; face as long as broad, with a low, median, longitudinal elevation; malar space very short, antenna 30-jointed.

Thorax stout; prescutum medially impressed; notaulices weakly defined on disk of mesoscutum; carinae limiting scutellar fovea obsolete; propodeum without trace of carinae.

Abdomen broad, finely and not densely punctate, tergal tubercles prominent, the impressions defining them posteriorly extending almost across tergites; tergite 1 hardly as long as broad, somewhat tumid, without carinae beyond the very short anterior basin; tergite 2 as long as broad at base, with deep, transverse gastrocoeli; ovipositor sheath with short hair.

Ferruginous; a small spot on each side of apex of propodeum, narrow apical margins of tergites 2-5, more or less broadly interrupted medially, and last two tergites black; antenna black, scape and pedicel partly pale in front; palpi and legs whitish, coxae, trochanters, and femora posteriorly brownish black, as are also the base and apex of the hind tibia; apical joints of tarsi and apices of other joints more or less deeply brown; wings hyaline, venetian black; ovipositor sheath black.

Host.—*Pectinophora gossypiella* (Saunders).

Type locality.—Boqueron, Puerto Rico.

Holotype and paratype.—U.S.N.M. No. 53495.

Two females reared May 20, 1938, by K. A. Bartlett under Puerto Rico No. 1991.

Genus TROMATOBIA Foerster

TROMATOBIA LATERALIS (Cresson), new combination

Olistopyga? lateralis CRESSON, Proc. Ent. Soc. Philadelphia, vol. 4, p. 34, 1865.
Ephialtes cressonii DEWITZ, Berlin. Ent. Zeitschr., vol. 25, p. 205, pl. 5, fig. 9, 1881.

This West Indian species is represented by specimens from both Puerto Rico and Cuba as well as by a female taken by P. W. Fattig at Atlanta, Ga., April 14, 1929. One of each sex was reared from a spider egg-cocoon from Lares, Puerto Rico, September 8, 1921, by G. N. Wolcott.

Genus *EXETASTES* Gravenhorst*EXETASTES RUFIPES* Cresson

Exetastes abdominalis var. *a* CRESSON, Proc. Ent. Soc. Philadelphia, vol. 4, p. 277, 1865.

Exetastes rufipes CRESSON, Proc. Ent. Soc. Philadelphia, vol. 4, p. 277 (note), 1865.

Exetastes purpureus CUSHMAN, Proc. U. S. Nat. Mus., vol. 84, p. 285, 1937.
New synonymy.

Additional material received since the publication of my revision of *Exetastes* shows *purpureus* to be merely a variation of *rufipes*. This material consists of six females and two males submitted for identification by George R. Ferguson, Oregon State Agricultural College, Corvallis, Oreg. They were collected July 20 and 26, 1937, at 7,000 and 8,500 feet on Steens Mountain, Oreg., by Bolinger and Jewett.

The series includes specimens intermediate in color of legs between the black of *purpureus* and the red of *rufipes* as well as specimens typical of each.

EXETASTES PILOSUS, new species

In my key to the North American species of *Exetastes*³ this species will run to couplet 4, where it agrees with the first alternate in the sculpture and pubescence of the head and thorax but disagrees with the other three characters. The color pattern of the head and thorax is like that of *lasius*, but the abdomen and legs are ferruginous. Beyond couplet 4 it runs, on most of the characters, to *bituminosus* Cushman, with which it agrees rather remarkably in the structure of the head and the form of the abdomen, but differs in the exceedingly slender antennae and legs as well as conspicuously in color.

Female.—Length 11 mm., antenna 11 mm.

Head and thorax mat, with very fine dense punctation and dense silvery pubescence; temples strongly receding, nearly flat; occipital carina sinuate below and joining hypostomal carina; ocellular and postocellar lines about equal and each much longer than diameter of an ocellus; face twice as broad as long, as broad as length of the parallel eyes, nearly flat, with a small median prominence; clypeus slightly less than twice as broad as long, strongly rounded at apex, transversely divided at basal third, apical part shining, finely shagreened; malar space two-thirds as long as basal width of mandible; mandible nearly twice as long as broad at base, teeth equal; antenna 73-75-jointed, extremely slender filiform, basal joint of flagellum fully six times as long as thick at apex but hardly twice as long as second, subapical joints moniliform.

³Proc. U. S. Nat. Mus., vol. 84, p. 249, 1937.

Thorax rather slender; notaulices absent; scutellum narrow, not at all margined; propodeum with carinae, but separated from metapleuron by a distinct but uneven pleural carina, spiracles small.

Legs extremely slender, hind femur fully nine times as long as deep and fully three-fourths as long as tibia; inner calcarium half as long as basitarsus; claws slender, entirely without teeth; coxae with sculpture and vestiture like thoracic.

Wings: Apical abscissa of radius strongly curved, hardly a half longer than basal abscissa; second recurrent very strongly curved, subangulate near top; nervulus slightly postfurcal; abscissula twice as long as intercubitella.

Abdomen slender, compressed but not deep at apex, subpolished, subtly shagreened and with scattered small punctures basally, polished and unsculptured apically; first tergite twice as long as broad, widening almost evenly from base to apex; second a little longer than broad at base; ovipositor straight, sheath slightly shorter than first tergite.

Head and thorax black; mandible medially, transverse ridge of clypeus (sometimes the apical portion), and collar whitish; apex of clypeus, anteroventral and upper margins of pronotum partly, notaulices and lateral margins of mesoscutum, scutellum laterally and apically, postscutellum, tegula, subalar tubercle, and apices of propodeum and metapleuron yellow to yellowish ferruginous; legs ferruginous, coxae and trochanters black, front and middle ones reddish below, hind coxa reddish piceous above, hind tarsus black; wings hyaline, venation black, stigma pale at extreme base; abdomen bright ferruginous, epipleura and sternites of segments 1-3 edged with black, plica dusky testaceous; sheath black.

Male.—Essentially like female, but flagellum distinctly less slender, legs even more slender and abdomen narrower, markings of thorax and legs paler; hind coxa entirely black; genital sheath ferruginous.

Type locality.—Corvallis, Oreg.

Type.—U.S.N.M. No. 53496.

Three females and one male collected October 25, 1935, by G. R. Ferguson.

ATOPOTROPHOS, new name

Atopognathus CUSHMAN, Proc. Ent. Soc. Washington, vol. 21, p. 116, 1919. Preoccupied by *Atopognathus* Bigot (1881) in Diptera.

I am indebted to Dr. Henry K. Townes, Jr., for calling my attention to the preoccupation of my generic name.

ATOPOTROPHOS COLLARIS (Cushman), new combination

Atopognathus collaris CUSHMAN, Proc. Ent. Soc. Washington, vol. 21, p. 117, fig. 1, 1919.

ATOPOTROPHOS BUCEPHALUS (Cresson), new combination

Mesoleptus ? bucephalus CRESSON, Trans. Amer. Ent. Soc., vol. 2, p. 36, 1868.

This Mexican species, known only from the type male, is larger than *collaris* (Cushman), with head relatively a little smaller, malar space shorter, abdomen more slender, and legs somewhat darker.

Genus PHYTODIETUS Gravenhorst

PHYTODIETUS PULCHERRIMUS (Cresson)

- Mesoleptus pulcherrimus* CRESSON, Trans. Amer. Ent. Soc., vol. 2, p. 101, male, 1868.
- Phytodietus distinctus* CRESSON, Trans. Amer. Ent. Soc., vol. 3, p. 166, 1870. New synonymy.
- Phytodietus zonatus* PROVANCHER, Nat. Can., vol. 6, p. 79, 1874; Petit faune entomologique du Canada, p. 483, female, 1883. New synonymy.
- Phytodietus pulcherrimus* (CRESSON) PROVANCHER, Nat. Can., vol. 12, p. 81, 1880; Petit faune entomologique du Canada, p. 484, male, 1883.
- Mesostenus nobilis* PROVANCHER, Nat. Can., vol. 13, p. 363, 1882; Petit faune entomologique du Canada, p. 785, female, 1883. New synonymy.
- Mesoleptus telarius* PROVANCHER, Additions et corrections au volume II de la faune entomologique du Canada . . . , p. 106, female, 1886. New synonymy.
- Meniscus pulcherrimus* CRESSON, Synopsis of the families and genera of the Hymenoptera of America, north of Mexico, p. 219, 1887.
- Phytodietus distinctus* CRESSON, Synopsis of the families and genera of the Hymenoptera of America, north of Mexico, p. 219, 1887.
- Phytodietus nobilis* (Provancher) DAVIS, Proc. Acad. Nat. Sci. Philadelphia, 1894, p. 187.
- Phytodietus telarius* (Provancher) DAVIS, Proc. Acad. Nat. Sci. Philadelphia, 1894, p. 189.
- Ctenopelma pulchra* ASHMEAD, Trans. Amer. Ent. Soc., vol. 22, p. 198, male, 1896.
- Phytodietus pulchra* (Ashmead) DAVIS, Trans. Amer. Ent. Soc., vol. 24, p. 340, 1897.
- Phytodietus pulcherrimus* (Cresson) ROHWER, Proc. U. S. Nat. Mus., vol. 57, p. 462, male, 1920.
- Phytodietus distinctus* (Cresson) ROHWER, Proc. U. S. Nat. Mus., vol. 57, p. 463, female, 1920.

I have for a long time been convinced of the identity of *pulcherrimus* and *distinctus*. Recently additional evidence of this synonymy has come to hand in the rearing by B. J. Landis August 19-26, 1935, at Columbus, Ohio, from *Loxostege similalis* Guenée, of four females (*distinctus*) and two males (*pulcherrimus*).

Both sexes vary greatly in color, especially the female. In the latter sex the body, with the exception of yellow markings on the orbits, the scutellum and postscutellum, and narrow apices of some of the tergites, may be entirely black, while at the other extreme are specimens with the propodeum, metapleuron, and first three or four tergites largely red and the head, thorax, and abdomen profusely marked with yellow. Between these two extremes all gradations occur.

Genus OPHION Fabricius

OPHION BERMUDENSIS, new species

Of the Neotropical species keyed out by Morley⁴ the present species runs best to *intricatus* Brullé, but that is a much larger and paler species.

Female.—Length 11 mm., antennae 11 mm.

Head thin, the temples strongly receding, convex; posterior ocelli nearly touching the eyes and separated from each other by somewhat less than the diameter of an ocellus; eyes very large, nearly reaching bases of mandibles, strongly emarginate within; face below very slightly broader than frons; convex medially, clypeal foveae deep, clypeus barely extending below lower tangent of eyes, its apex broadly arcuate and with a narrow reflexed margin; mandibles stout, barely a half longer than broad at base; antenna 47-jointed, moderately stout, tapering at apex, all joints of flagellum distinctly longer than thick, the first joint much less than twice as long as second.

Thorax stout, about a half longer than deep; mesoscutum finely and sparsely punctate, notaulices distinct and broad anteriorly, obsolete indicated well back; scutellum convex, sparsely punctate, margined basally; mesopleuron granularly opaque and indefinitely rugulose below, polished and sparsely punctate above; propodeum opaque, granularly rugulose, completely areolated except that basal median area is not defined and the apical carina is interrupted between the median carinae, the basal carina weaker laterally, as are also the lateral carinae (in some of the other specimens these weak carinae are even weaker almost to the extent of being absent).

Legs stout, the hind femur barely twice as long as coxa and hardly six times as long as deep; apical joint of hind tarsus not longer than fourth.

Wings: Basal abscissa of radius straight, not thickened at base, apical abscissa gently curved and about two and one-half times as long as basal abscissa; basal vein straight; first recurrent nearly erect, ramellus reaching fully halfway to basal vein; intercubitus, second abscissa of cubitus, and second recurrent nearly in the ratio of 1:2:4; nervulus slightly antefurcal; radiella strongly curved at base, basal abscissa nearly as long as apical abscissa; intercubitella about a third as long as basal abscissa of radiella; nervellus strongly broken at or a little above middle, reclivous, its upper abscissa perpendicular.

⁴ Revision of the Ichneumonidae based on the collection in the British Museum (Natural History), pt. 1, p. 54, 1912.

Abdomen barely twice as long as head and thorax; spiracles of first segment at apical two-fifths; second tergite much shorter than first and barely as long as third.

Reddish brown; orbits and vertex whitish; face medially brighter than general body color and clypeus and mandibles ferruginous; antennae ferruginous, scape and pedicel darker; scutellum and thoracic sutures paler than general color; wings hyaline, veins blackish, stigma ferruginous, paler toward apex, tegulae and radices stramineous; legs concolorous with body, the trochanters, tibiae, and tarsi more ferruginous.

Male.—Essentially like female.

Type locality.—Bermuda.

Type.—U.S.N.M. No. 53497.

One female and four males received from Fred M. Schott. Two of the males are a little larger and slightly lighter in color.

Genus IDECHTHIS Foerster

IDECHTHIS PERUVIANA, new species

Very similar to the cosmopolitan *I. canescens* (Gravenhorst), from which it differs principally in the somewhat stouter antennae with the subapical joints shorter than thick and not at all moniliform, the finer and denser punctation of mesoscutum, and the black second tergite with apical angles triangularly ferruginous.

Female.—Length 7 mm., antennae 4 mm., ovipositor sheath 2 mm.

Head opaque, with dense, glittering, silvery pubescence on face, clypeus, sides of frons, temples, and cheeks; temples convexly receding, seen from above half as long as short diameter of eye; diameter of an ocellus distinctly longer than ocellular line and about two-thirds as long as postocellar line; eyes shallowly concave opposite antennae; face very slightly narrower than shortest width of frons; antenna 35-jointed, flagellum of uniform thickness, basal joint hardly four times as long as thick, subapical joints slightly thicker than long, not at all moniliform.

Thorax with vestiture like that of head, opaque; pronotum finely punctate, the scrobe shining and transversely striate; mesoscutum very finely, confluent punctate; scutellum more sparsely and finely punctate; mesopleuron and metapleuron very finely shagreened, with minute sparse punctures, speculum polished, scrobe transversely striate; propodeum overlapping basal half of hind coxae, basally shagreened and punctate, apically transversely rugulose, areola elongate, parallel-sided behind costulae, confluent with petiolar area.

Legs: Hind femur and tibia rather stout, tarsus little longer than tibia, longer calcarium not quite reaching middle of basitarsus.

Wings: Areolet very small, with long petiole; postnervellus broken at middle, nervellus strongly inclivous, unbroken.

Abdomen slender, minutely granular, subopaque; first segment without trace of grooves or foveae, postpetiole nearly twice as broad as petiole; second tergite four times as long as broad at base and much more than twice as broad at apex as at base, spiracles slightly less than three-fifths of way from base to apex; segments beyond third compressed; ovipositor slender, upcurved, sheath a little more than one and a half times as long as first segment.

Black with abdomen beyond second tergite and the femora largely ferruginous; scape and pedicel in front, mandible, palpi, and tegulae yellow; scape and pedicel piceous above, flagellum black; wings hyaline, venation blackish; front and middle coxae and trochanters, apices of their femora, and bases of their tibiae yellow, femora otherwise ferruginous and tibiae and tarsi stramineous; hind coxa black, its apex broadly and trochanter beneath yellow, femur piceoferruginous, tibia and tarsus blackish, the tibia with a trace of yellow at extreme base above, calcaria yellow; first segment entirely black, second black with apical corners ferruginous, other tergites ferruginous more or less blackish above.

Male.—Essentially like female.

Type locality.—Lima, Peru.

Host.—*Mescinia peruella* Schaus.

Type.—U.S.N.M. No. 53498.

Three females and one male reared by Dr. J. Wille under his numbers 318-30, 45-31, and 226-32.

Tribe CREMASTINI

BRACHYSCLEROMA, new genus

Head very thin, sublenticular, temples very strongly receding, sometimes nearly perpendicular to longitudinal axis; ocelli small in both sexes; clypeus more or less distinctly separated from face, apically subacute, with an oblique impression on each side along margin; malar space long; mandible small, upper tooth longer than lower; antennal scape subcylindrical, hardly thicker than flagellum, apex hardly oblique; flagellum setiform, tapering from base to apex, with long, very dense reclinate pubescence and also with erect verticillate hairs at apex of each joint, all joints short, basal joint shorter than scape; palpi of only moderate length and very slender; maxillae of normal length and form.

Thorax very robust; mesoscutum precipitate anteriorly, notaulices not or weakly defined; scutellum strongly margined to apex laterally; mesopleuron with a broad, deep, oblique furrow, usually foveolate at

bottom; sternauclices deep, more or less foveolate; propodeum strongly rounded, perpendicular apically, not overlapping hind coxae, completely areolated except that apical abscissa of lateral carina and sometimes costellae are absent.

Legs moderately stout and, especially hind legs, very long; tibiae, especially hind tibia, very coarsely and deeply punctate and with coarse, long hair; claws very small, pectinate, the pecten of each claw composed of two or three slender teeth; calcaria very long, inner one of each pair much longer than outer.

Wings broad, nearly or quite reaching apex of abdomen; stigma narrow, radius at or slightly beyond middle; basal vein perpendicular, curved; metacarpus much longer than stigma; areolet small, oblique, recurrent near apex; discocubitus sharply curved or broken basad of bulla; recurrent straight, bulla weakly divided; nervulus broken far below middle; abscissula nearly or quite as long as intercubitella; mediella distinct to base; nervulus broken far below middle and strongly inclivous; longitudinal veins of hind wing obsolete beyond cross veins.

Abdomen relatively short and slender; first segment about as long as next two combined, postpetiole much longer than broad, sternite not reaching spiracles and not at all enclosed by lateral margins of tergite; tergite 2 distinctly shorter than 3, epipleura not carinately separated, spiracles in epipleura; ovipositor long and extremely slender, attenuate apically, apical notch inconspicuous.

Genotype.—*Brachyscleroma apoderi*, new species.

Of the other cremastine genera *Brachyscleroma* is most closely allied to *Dimophora* Foerster, resembling that genus in the short, robust thorax with distinct sternauclices; the margined scutellum; the strongly rounded and posteriorly precipitate propodeum not overlapping the hind coxae; the stout, long hind legs; and the short abdomen with relatively long first segment and short second and third segments, the first sternite not at all covered by the lateral margins of the tergite and not nearly reaching the spiracles. Many of the characters common to the two genera are exaggerated in *Brachyscleroma*; the sternauclices are deeper and more or less foveolate; the scutellum is margined to apex, not merely at base; the hind legs are relatively longer as compared to the front legs; and the first abdominal segment is relatively longer and the second and third segments are relatively shorter. Otherwise *Brachyscleroma* differs from *Dimophora* by most of the features mentioned in the description, notably the thin, lenticular head; the deep, oblique mesopleural furrow; the narrow stigma; the small, oblique areolet; the very short second tergite with spiracles in the epipleura, which are not carinately separated; and the very long, slender ovipositor.

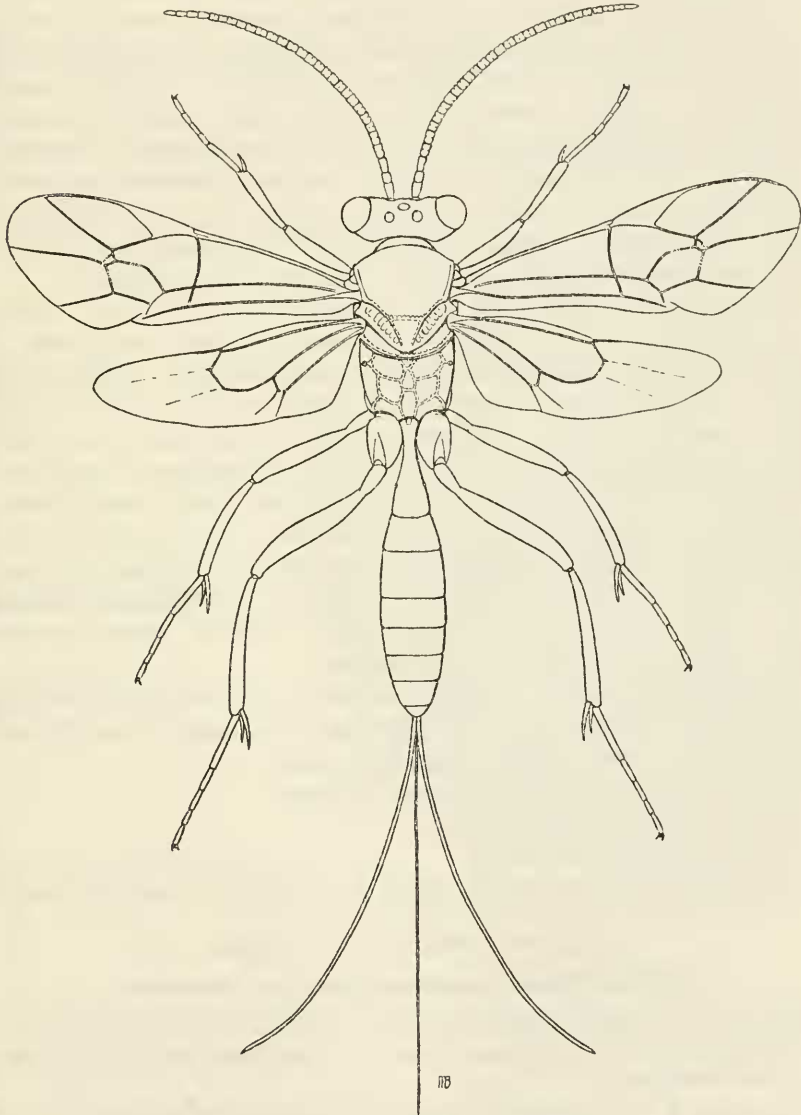
The coleopterous host is also unusual for a cremastine.

BRACHYSLEROMA APODERI, new species

FIGURE 16

Female.—Length 5 mm., antenna 3 mm., ovipositor sheath 4 mm.

Head more than 2.5 times as broad as thick; temples flat, polished, nearly perpendicular to longitudinal axis; postocellar line longer than ocellocular line and more than twice as long as diameter of an ocellus; frons transversely striatopunctate; face nearly twice as long as broad,

FIGURE 16.—*Brachyscleroma apoderi*, new genus and species.

coarsely, densely umbilicate-punctate, this sculpture extending onto base of clypeus and obscuring the separating furrow; malar space nearly as long as basal width of mandible, rugose before and striate behind malar furrow; scape nearly twice as long as thick, about twice as long as pedicel and much longer than first joint of flagellum; flagellum 27-jointed, fully twice as thick at base as at apex and tapering gradually, the joints successively very slightly shorter from base to apex.

Thorax nearly as deep as long; densely punctate dorsally, mostly polished laterally, with all lateral furrows strongly foveolate; pronotum punctate along humeral margin; notaulices not defined; scutellum more coarsely punctate than mesoscutum, scutellar furrow foveolate; mesopleural furrow and sternaulices strongly foveolate; propodeum polished, margins of areas foveolate; median areas narrow, areola pentagonal with costulae behind middle; inner hind calcarium about three-fourths as long as basitarsus; tarsus hardly as long as tibia, basitarsus hardly longer than joints 2 and 3 combined.

Abdomen little more than half as broad as thorax; with dense, long pubescence except on broad, polished, median, apical areas of first three tergites and middle areas of other tergites. Black; mandibles and polished apical portion of clypeus light brownish; palpi white; antenna fuscous, stramineous basally; wings hyaline, venation brown, stigma paler, costa and radix stramineous, tegula testaceous; front and middle legs stramineous; hind coxa piceous, stramineous ventrally, trochanter stramineous, femur and tibia rufous, femur paler apically; joints 2-4 of tarsus paler than basitarsus; petiole whitish, postpetiole black; rest of abdomen rufotestaceous, paler toward apex, tergite 2 partly reddish piceous toward apex; ovipositor sheath brownish yellow.

Male.—Very similar to female in both structure and color, but tergites beyond first brownish, with base and sides of second and basal angles of third whitish; genitalia white.

Host.—*Apoderus quadripunctatus* Gyllenhal.

Type locality.—Tjipetir, Java.

Type.—U.S.N.M. No. 53499.

One female and two males reared in 1936 by J. Van der Vecht.

Genus PSEUDERIPTERNUS Viereck

PSEUDERIPTERNUS ELONGATUS (Davis), new combination

Atelenti (sic!) *elongatus* DAVIS, Trans. Amer. Ent. Soc., vol. 24, p. 362, 1897.

Pseuderipternus gracilipes CUSHMAN, Proc. U. S. Nat. Mus., vol. 53, p. 507, 1917.

New synonymy.

Paratype *a* of *gracilipes* has been compared with the type of *elongatus* and found almost identical.